WHAT IS CLAIMED IS:

1. A method of encoding transformed quantized video data for transmission over a network, comprising:

receiving a matrix of transform coefficients;

isolating specific coefficient locations and groups of coefficients to be represented in a descriptor;

mapping the values of coefficients in said specific locations and said groups to defined identifiers;

combining said identifiers to create a first descriptor for the matrix;

including information in said first descriptor to explicitly identify the values at said specific coefficient locations;

creating descriptors smaller then the first descriptor that contain the explicit values coefficients in said groups of coefficients;

creating entropy encoding schemes for said descriptors and said coefficient values; and

encoding said descriptors and coefficient values according to said encoding schemes.

2. The method of Claim 1, wherein said matrix is a matrix of discrete cosine transform coefficients.

3. The method of Claim 2, wherein said matrix is a 4 x 4 matrix.

4. The method of Claim 1, wherein said specific coefficient locations are from a top left quadrant of said matrix.

5. The method of Claim 4, wherein said groups comprise 2 x 2 coefficient quadrants correspondingly located in top right, bottom left and bottom right portions of the 4 x 4 matrix.

6. The method of Claim 1, wherein said coefficient locations and groups of coefficients are mapped to identifiers according to the coefficients' absolute values, and said information includes the signs of the coefficients.

7. The method of Claim 1, wherein at least a first of said encoding schemes utilizes a static entropy code table created before said encoding by analyzing descriptors

created from samples of video data and creating said code table from an analysis of the probabilities of said sample descriptors.

8. The method of Claim 7, wherein said static entropy code is a static Huffman code.

9. The method of Claim 1, wherein at least a first of said encoding schemes utilizes an adaptive entropy code that is modified over the course of the encoding process according to the properties of the currently encoded video source.

10. The method of Claim 9, wherein said adaptive entropy code is an adaptive Huffman code.

11. A method of encoding a matrix of transform coefficients, comprising:

receiving a matrix of transform coefficients;

creating a probabilistic model representing dependencies and correlations between coefficient locations and groups of coefficients from said matrix; and

utilizing the probabilistic model to create an entropy encoding of the matrix.

12. The method of Claim 11, wherein said coefficients are discrete cosine transform coefficients.

13. The method of Claim 11, wherein said probabilistic model is a Markov model.

14. The method of Claim 11, wherein said probabilistic model is represented by descriptors that correspond to coefficient locations and groups of coefficients.

15. The method of Claim 14, wherein said descriptors contain internal descriptors that describe the explicit coefficients within groups represented by relatively larger descriptors.

16. A computer readable medium having stored thereon a plurality of instructions which, when executed by a processor in a computer system, cause the processor to perform the process of:

accepting a matrix of quantized transform coefficients;

creating one or more descriptors that represent said matrix; and

encoding said matrix utilizing an entropy encoding scheme created from projected probabilities of the descriptors.

17. The computer readable medium of Claim 16, wherein said entropy encoding scheme is created prior to encoding by analyzing the probabilities of descriptors created from a representative media sample.

18. The computer readable medium of Claim 16, wherein said entropy encoding scheme is created during the encoding by analyzing the probabilities of descriptors as they are created.

19. The computer readable medium of Claim 16, wherein said entropy encoding scheme is modified during the encoding by analyzing the probabilities of descriptors as they are created.

20. A video encoding system, comprising:

a host computer;

a digital video input sequence;

an output stream comprising an encoded representation of said video input sequence, wherein said output stream includes entropy encoded representations of transformed video data, and wherein said entropy encoding is based on a probabilistic analysis of said transformed video data; and

a video encoding module configured to be executed on said host computer, wherein said video encoding module is configured to encode said video input sequence according to a probabilistic analysis of coefficient matrices created by transforming said video input sequence.

21. The system of Claim 17, wherein said coefficient matrices comprise matrices of discrete cosine transform coefficients.

22. The system of Claim 17, wherein said video encoding module is configured to utilize Markov modeling of discrete transform coefficient matrices to create said encoded representations.

23. The system of Claim 17, further comprising a storage device used to store said encoded representation.

24. The system of Claim 17, further comprising a computer system configured to transmit said encoded representation over a communications network for a real-time presentation.

25. The system of Claim 17, further comprising a decoder configured to decode said entropy encoded representation.

26. A system for encoding a matrix of transform coefficients, comprising:

a grouping module configured to accept said matrix and to selectively define a plurality of coefficient locations as belonging to one or more defined groups; and

an encoding module that contains at least a first entropy encoding scheme for coefficients and coefficient groups, the encoding module configured to create encoded representations of said matrix, resulting in an entropy encoded matrix, by one of entropy encoding said coefficients and coefficient groups according to said entropy encoding scheme, and entropy encoding representations of those coefficients and coefficient groups.

27. The system of Claim 26, wherein said groups are defined by the locations of corresponding associated constituent coefficients within the matrix.

28. The system of Claim 26, wherein said at least first entropy encoding scheme is created prior to encoding by analyzing probabilities of coefficients and coefficient groups from a representative media sample.

29. The system of Claim 26, wherein said at least first entropy encoding scheme is created during the encoding by analyzing the probabilities of coefficients and coefficient groups as they are encoded.

30. The system of Claim 26, wherein said entropy encoding scheme is modified during the encoding by analyzing the probabilities of coefficients and coefficient groups as they are encoded.

31. The system of Claim 26, wherein said matrix is a matrix of discrete cosine transform coefficients.

32. The system of Claim 26, wherein said grouping module is configured to create descriptors for said matrix that represent coefficient values and groupings.

33. The system of Claim 32, further comprising a decoding module that recreates coefficient matrices from said entropy encoded matrix.

34. The system of Claim 26, further comprising an analysis module configured to create a Markov model representing the correlations and dependencies contained within said matrix.

35. The system of Claim 34, wherein said analysis module contains at least a first static entropy code table to be used in said entropy encoding scheme, said first static entropy code table created before being used for said matrix encoding.

36. The system of Claim 35, wherein said first static entropy code table is a static Huffman code table.

37. The system of Claim 34, wherein said analysis module includes an adaptive entropy code table configured to be modified as said matrix is encoded.

38. The system of Claim 37, wherein said adaptive entropy code table is an adaptive Huffman code table.